



## PATIENT PRESENTING CLINICAL SIGNS

Miu Miu Terrat

Diabetic, difficult to regulate. Not doing well, gait off; sliding LF while walking. Presented with muscle rigidity, preferring to lay down. Liver enlarged. Current meds: Prozinc insulin, convenia injection  
8/30/21 BP 166/132

## SPECIES

Abnormal PE/Chem/CBC/UA Results: Glu 508, BUN 38, GGT 30, Glob 5.5, Chol 251, Total Protein 9.6

Feline

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

BREED	FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
DSH								
SEX	NORMAL PARAMETER	-----	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
Neutered Male	PATIENT		160	0.59	1.74	0.61	54.4	88.1
AGE	FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Sisson)	LA 2D 4-chamber long axis AS to FW (Sisson) (cm)		LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m/)
14 Years								
WEIGHT	NORMAL PARAMETER	<1.5	0.88-1.79	0.7-1.7		<1.6	<1.3	40-60
12.2 Pounds	PATIENT	1.3	1.3	1.4		<2.0	<2.0	NM
Adapted from June Boon, Veterinary Echocardiography, 1998 Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705								

## INTERPRETED BY

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

## IMAGING PERFORMED BY

Jessica Miller

## HOSPITAL NAME

Hackettstown VH

## REFERRING VET

Dr. Bahr

## INVOICE

25089

## DATE

8/31/21

### Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate LA measurements. The cranial and caudal **mitral** valve leaflets presented normal linear structure and kinetics. The **left ventricle** presented normal thicknesses with linear contour and was not dilated nor restricted. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. **Contractility** of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions and angles of the myocardium. The **left ventricular outflow** tract demonstrated normal laminar flow and overall subjective normal structural integrity. Color doppler assessment of the aortic valve revealed minor insufficiency. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinetics. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was noted or extra cardiac pathology in the visible planes. The cranial **mediastinum** and **pericardial** regions were free of masses in the visible window.

### Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 cm exhibited normal thickness and tone. Primarily anechoic urine was present in the lumen. Mild particulate non-dependent sediment was present without evidence of calculus formation. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic mural changes were noted.



**PATIENT**

Miu Miu Terrat

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Neutered Male

**AGE**

14 Years

**WEIGHT**

12.2 Pounds

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING PERFORMED BY**

Jessica Miller

**HOSPITAL NAME**

Hackettstown VH

**REFERRING VET**

Dr. Bahr

**INVOICE**

25089

**DATE**

8/31/21

Normal renal size with asymmetrical margination was present in both kidneys. The renal cortex presented uniformly increased in echogenicity with uniform echotexture. The renal cortex appeared to be hypertrophied resulting in an altered cortex: medulla ratio. Mild loss of corticomedullary distinction was also present. The renal medullary volume was subjectively reduced. Both kidneys exhibited moderate pyelectasia without overt evidence of concurrent left or right ureter dilation. The left kidney measured 4.5 cm. The right kidney measured 4.4 cm.

**Adrenal Glands**

The adrenal glands were mildly prominent in size with maintained symmetrical capsule contour with uniform hypoechoic parenchyma. The adrenal glands measured 0.61 cm in width each.

**Spleen**

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis.

Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted. The spleen measured 0.55 cm in width.

**Liver**

The liver exhibited generalized enlargement, primarily in the mid to left liver owing to mildly expansive, asymmetrical, non-homogeneous to mixed echogenic mass lesion measuring approximately 6.0 cm x 4.0 cm. A focal, thinly walled parenchymal cyst was noted in the right liver lobes, containing anechoic fluid and measuring 1.4 cm diameter. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

**Gastrointestinal**

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained echogenic, nonshadowing ingesta most consistent with post prandial presentation without signs of ileus, obstruction or foreign material.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. Segmental echogenic digesta/chyme present.

Normal visible colon wall layers were present with apparent formed feces in lumen.

**Pancreas**

The left limb of the pancreas exhibited mild prominent size and mild hypoechoic parenchyma compared to adjacent omentum.

**Free Abdomen**

No overt lymphadenopathy or peritoneal effusion was present.

**PRIMARY FINDINGS**

- Overtly normal cardiac structure and function
- Mild aortic valve insufficiency – not clinically significant
- Mid to left hepatic mass with concurrent right focal parenchymal cyst – neoplasia probable



## PATIENT

Miu Miu Terrat

- Bilateral chronic interstitial nephrosis with moderate pyelectasia

## SPECIES

Feline

- Mild urinary bladder sediment

- Hypoechoic to prominent left pancreas – potential for mild chronic active pancreatitis

## BREED

DSH

## SECONDARY FINDINGS

- Gastric ingesta – suspect post-prandial presentation

- Bilateral subjective prominent adrenal glands

## SEX

Neutered Male

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The bilateral pyelectasia may be secondary to chronic renal changes, pelvic scarring, IV fluid therapy (if applicable), while the possibility of low-grade pyelonephritis cannot be excluded.

Urine culture and sensitivity on sterile urine sample recommended given the probable glucosuria. Assuming normal clotting status, ultrasound guided FNA of the hepatic mass may be considered for screening cytology and further clarification.

## AGE

14 Years

The mildly prominent left and right adrenal glands are of unclear clinical significance and may be a normal age related or patient variant with potential for stress hyperplasia. No overt evidence of adrenal tumors.

## WEIGHT

12.2 Pounds

For an additional charge, internal medicine consult can be utilized through Sonopath.com. You can select the internal medicine drop down at <http://spa.sonopath.com/>.

One of the world's top internists & SonoPath associate Dr. Remo Lobetti BVSc, MMedVet, PhD, DECVIM can evaluate your case through SonoPath. <https://sonopath.com/resources/sonopath-services/internal-medicine-teleconsultation-services>

## INTERPRETED BY

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)



## IMAGING PERFORMED BY

Jessica Miller

## HOSPITAL NAME

Hackettstown VH

## REFERRING VET

Dr. Bahr



## INVOICE

25089

## DATE

8/31/21



**PATIENT**

Miu Miu Terrat

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Neutered Male

**AGE**

14 Years

**WEIGHT**

12.2 Pounds

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING PERFORMED BY**

Jessica Miller

**HOSPITAL NAME**

Hackettstown VH

**REFERRING VET**

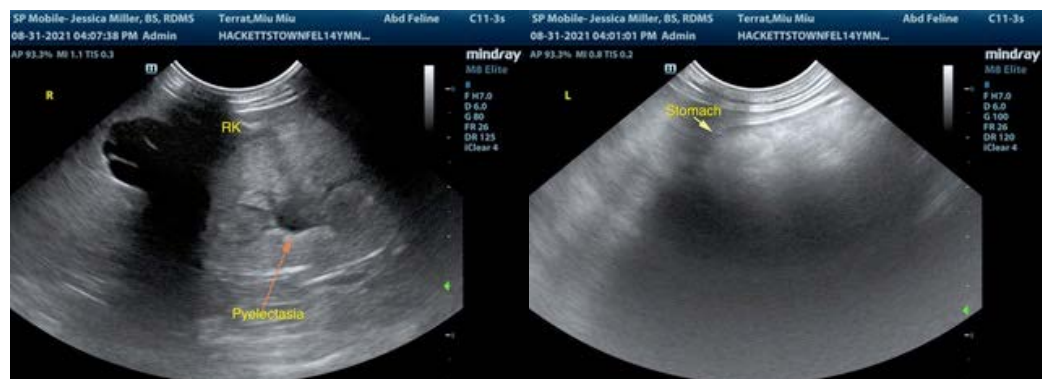
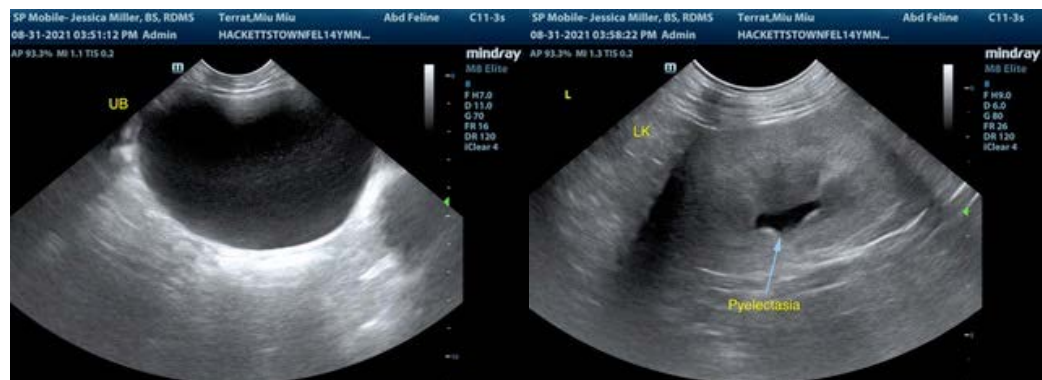
Dr. Bahr

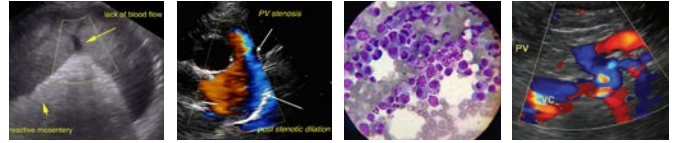
**INVOICE**

25089

**DATE**

8/31/21





**PATIENT**

Miu Miu Terrat

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

**SPECIES**

Feline

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

**R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)**  
info@SonoPath.com

**BREED**

DSH

**SEX**

Neutered Male

**AGE**

14 Years

**WEIGHT**

12.2 Pounds

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING  
PERFORMED BY**

Jessica Miller

**HOSPITAL NAME**

Hackettstown VH

**REFERRING VET**

Dr. Bahr

**INVOICE**

25089

**DATE**

8/31/21